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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,747	01/10/2000	MITCHELL REID	SILA:054	4684

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EXAMINER

MUNOZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/480,747

Applicant(s)

REID ET AL.

Examiner

Guillermo Munoz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

The indicated allowability of claims 1-5, 7, 8, 11-17 and 20-46 is withdrawn in view of the newly discovered reference(s) to Arai. Rejections based on the newly cited reference(s) follow.

Specification

The disclosure is objected to because of the following informalities:

In line 14 of page 7, change "U.S. Patent Application Serial Number 09/035,175" to — U.S. Patent Number 6385235—.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-13, 15-28, 30-31, 33-40, 42 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair et al. (cited in office action mailed March 21, 2004) in view of Arai (cited in IDS filed 12/29/2003).

Regarding claim 1; Blair et al. disclose almost all the claimed subject matter "providing an asynchronous serial port...single integrated circuit...communicate with a system-side external

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circuit...use the asynchronous serial port to transfer data formatted with a synchronous modem transmission protocol...between the single integrated circuit and the system-side external circuit through the asynchronous serial port” in claim 1 as follows. Blair et al. teach a DSP circuit (element 70) having an embedded UART (element 76) for communicating information with system-side external circuit (element 80) across a serial communications interface (Bi-directional arrow connecting UART’s 76), however, Blair et al. fails to teach integrating the modem circuitry and system-side line isolation circuitry within a single integrated circuit.

Arai disclose a Modem Apparatus comprising a modem apparatus (element 2) with line isolation circuitry (elements 16 and 17) integrated onto a single LSI circuit, note Figure 3 and Col. 2, lines 15-22

Therefore, it would have been obvious to one having ordinary skill in the art to modify Blair et al.’s teaching of performing synchronous to asynchronous conversion with Arai’s integrated modem and isolation circuit, since Arai suggest in Col. 2, lines 16-22, that the result of the modification would reduce the size of the modem apparatus.

Regarding claim 2, Blair et al. further teach the claimed subject matter, note Fig. 2, element 20.

Regarding claim 3, Blair et al. do not explicitly state “asynchronous serial port is a transmit pin of a single integrated circuit”, however, the function of a DSP having an embedded UART, which is connected via a serial digital interface to the DTE is the same, note figure 4A.

Regarding claim 4, Blair et al. do not explicitly state “asynchronous serial port is a receive pin of a single integrated circuit”, however, the function of a DSP having an embedded UART, which is connected via a serial digital interface to the DTE is the same, note figure 4A.

Regarding claim 5, see claim 3.

Regarding claim 6, see claim 1.

Regarding claim 8, Blair et al. teach the use of the modem adapter for communicating across a Wide Area Network using voltage protection circuitry, however, Blair et al. fails to teach transmitting across an isolation barrier.

Arai teach the claimed subject matter “transfer data across an isolation barrier”, note figure 3 elements 16 and 17.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to Blair et al.’s modem with Arai’s teaching of using isolation capacitors, since Arai suggest in Col. 2, lines 16-22, that the result of the modification would provide voltage protection and system isolation.

Regarding claim 9, see claim 3.

Regarding claim 10, Blair et al. further teach the claimed subject matter, note Figures 5A-5E and Col. 6, lines 49-67.

Regarding claim 11, Blair et al. further teach the claimed subject matter, note Col. 6, lines 64-65.

Regarding claim 12, Blair et al. further teach the claimed subject matter, note Col. 6, lines 65-66.

Regarding claim 13, Blair et al. further teach the claimed subject matter “an output pin separate from the serial pin” by the inherency of the operation of the serial interface.

Regarding claim 15, Blair et al. further teach the claimed subject matter; note Figure 5B and Col. 6, lines 63-65.

Regarding claim 16, see claim 15.

Regarding claim 17, see claim 15.

Regarding claim 18, see claim 4.

Regarding claim 19, see claim 10.

Regarding claim 20, see claim 13.

Regarding claim 21, Blair et al. further teach the claimed subject matter “available to accept” by the inherency of the operation of the serial interface.

Regarding claim 22, Blair et al. further teach the claimed subject matter “clear to send” by the inherency of the operation of the serial interface.

Regarding claim 23, see claim 1.

Regarding claim 24, see claim 8.

Regarding claim 25, see claim 2.

Regarding claim 26, as applied to claims 11 and 21, Blair et al further teach the claimed subject matter, by providing the end of frame flag within the serial transmission, note Col. 6, lines 64-65.

Regarding claim 27, see claim 12.

Regarding claim 28, see claim 15.

Regarding claim 30, see claim 1.

Regarding claim 31, see claim 13.

Regarding claim 33, see claim 22.

Regarding claim 34, see claim 16.

Regarding claim 35, see claim 17.

Regarding claim 36, see claim 2.

Regarding claim 37, see claim 1.

Regarding claim 38, see claim 8.

Regarding claim 39, see claim 2.

Regarding claim 40, see claim 26.

Regarding claim 42, see claim 20.

Regarding claim 44, see claim 21.

Regarding claim 45, see claim 16.

Regarding claim 46, see claim 17.

Claims 14, 29, 32, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair et al. (cited in office action mailed March 21, 2004) in view of Arai (cited in IDS filed 12/29/2003) and Zilog (cited in office action mailed March 28, 2003).

Regarding claim 14; as applied to claim 1, Blair et al. teach providing end of frame flags within the data being transmitted across the serial port, however, Blair et al. do not teach providing "end of frame" information on a pin separate from the serial pin.

Zilog teach a similar single chip modem/isolation circuit wherein an end of frame bit is set to indicate that an entire HDLC frame has been received, note page 20.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Blair et al.'s DSP interface with Zilog's teaching of transmitting an

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end of frame bit to the external circuit, since the result of the additional end of frame indicator would insure the integrity of the frame is not compromised by false flag detections.

Regarding claim 29, see claim 14.

Regarding claim 32, see claim 14.

Regarding claim 41, see claim 14.

Regarding claim 43, see claim 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 571-272-3045. The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GM
December 13, 2004



JAYANTI PATEL
SUPERVISORY PATENT EXAMINER